

three inches = one foot  
one and one half inches = one foot  
one inch = one foot  
three quarters inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
one quarter inch = one foot  
one eighth inch = one foot  
one eighth inch = one foot

SYMBOLS DESCRIPTION

SITE WORK

	SIGNAL DUCT BANK
	PRIMARY ELECTRICAL DUCT BANK
	UNDERGROUND SITE LIGHTING CIRCUIT
	UNDERGROUND ELECTRICAL CONDUIT
	SITE LIGHT WITH SINGLE LUMINAIRES (30' POLE/14' POLE)
	SITE LIGHT WITH TWIN LUMINAIRE

ONE LINE DIAGRAMS

	BATTERY
	HIGH VOLTAGE OIL CIRCUIT BREAKER
	HIGH VOLTAGE DRAWOUT AIR CIRCUIT BREAKER
	SWITCH AND FUSE UNIT
	FIXED CIRCUIT BREAKER
	LOW VOLTAGE DRAWOUT CIRCUIT BREAKER
	FUSED DRAWOUT POTENTIAL TRANSFORMER
	AMMETER
	VOLTMETER
	WATTMETER
	WATT-HOUR METER
	INSTANTENOUS OVERCURRENT OF RATE-OF-RISE RELAY
	AC-TIME OVERCURRENT RELAY
	AC-DIRECTIONAL OVERCURRENT RELAY
	LOCKING OUT RELAY
	LIGHTNING ARRESTOR
	GROUND CONNECTION
	POTHEAD
	STRESS CONE
	PUSH-BUTTON STATION
	CURRENT TRANSFORMER
	TRANSFORMER

REWIRING AND DEMOLITION

CLG	WALL
	EXISTING CONDUIT AND WIRE TO REMAIN.
	EXISTING CONDUIT AND WIRE TO BE REMOVED.
	EXISTING SWITCH TO BE REMOVED. "3" INDICATES THE POLES.
	EXISTING DUPLEX RECEPTACLE TO BE REMOVED.
	EXISTING EMERGENCY DUPLEX RECEPTACLE TO BE REMOVED.
	EXISTING COMMUNICATIONS OUTLET TO BE REMOVED.
	EXISTING JUNCTION BOX TO BE REMOVED
	EXISTING NURSE DOME LIGHT DEVICE TO BE REMOVED
	EXISTING NURSE CALL DEVICE TO BE REMOVED
	EXISTING FLUORESCENT 2'X4' LIGHT TO BE REMOVED
	EXISTING FLUORESCENT 1'X4' LIGHT TO BE REMOVED
	EXISTING PATIENT HEAD BOARD TO BE REMOVED

SYMBOLS DESCRIPTION

LIGHTING SYSTEM

	FLUORESCENT 2'X4' LIGHT FIXTURE. OUTSIDE LETTER INDICATES FIXTURE TYPE.
	FLUORESCENT 2'X2' LIGHT FIXTURE. OUTSIDE LETTER INDICATES FIXTURE TYPE.
	EMERGENCY FLUORESCENT LIGHT FIXTURE (LIFE SAFETY)
	EMERGENCY FLUORESCENT LIGHT FIXTURE (CRITICAL BRANCH)

	LIGHT FIXTURE, WALL MTD 7'-6" AFF UNLESS OTHERWISE NOTED OUTSIDE LETTERS INDICATE FIXTURE TYPE.
	EXIT LIGHT, WALL MTD 7'-6" UNLESS OTHERWISE NOTED
	EXIT LIGHT W/DIRECTIONAL ARROWS, WALL MTD 7'-6" UNLESS OTHERWISE NOTED

NOTES: SUBSCRIPT IN CAPITOL LETTER INDICATES TYPE OF FIXTURE, SEE FIXTURE SCHEDULE

RECEPTACLES

	DUPLEX RECEPTACLE HOSPITAL GRADE NEMA 5-20R AT 18" AFF U.N.O.
	SINGLE RECEPTACLE HOSPITAL GRADE NEMA 5-20R AT 18" AFF U.N.O.
	DUPLEX RECEPTACLE RED HOSPITAL GRADE NEMA 5-20R ON EMERGENCY POWER AT 18" AFF U.N.O.
	DUPLEX RECEPTACLE HOSPITAL GRADE NEMA 5-20R AT 18" AFF U.N.O. WITH GROUND FAULT CIRCUIT INTERRUPTION
	DUPLEX RECEPTACLE HOSPITAL GRADE NEMA 5-20R MOUNTED HORIZANTALLY 6" ABOVE COUNTER BACKSPLASH. COORDINATE WITH ARCHITECT.
	QUADRAPLEX RECEPTACLE RED HOSPITAL GRADE NEMA 5-20R ON EMERGENCY POWER AT 18" AFF U.N.O.
	QUADRAPLEX RECEPTACLE RED HOSPITAL GRADE NEMA 5-20R ON EMERGENCY POWER AT 18" AFF U.N.O.
	ELECTRICAL STRIP MOLD (OUTLETS ON 2'-0" CENTERS OR AS DESIGNATED ON DRAWINGS), MTD 4'-0" AFF OR AS INDICATED
	POKE-THRU WIREMOLD #RCS SERIES TO SUPPLY POWER AND VOICE/DATA.
	JUNCTION BOX

GENERAL

CLG	WALL
	SINGLE POLE SWITCH WITH SUFFIX a,b,c ETC. INDICATES CONTROLS OF FIXTURE(S) WITH SAME DESIGNATION(S).
	DUAL LEVEL LIGHT SWITCH
	THREE POLE SWITCH
	FOUR POLE SWITCH
	KEY OPERATED SWITCH
	MANUAL MOTOR STARTING SWITCH
	DIMMER LIGHT SWITCH
	FURNISH AND INSTALL (1) WATTSTOPPER WALL SWITCH OCCPANCY SENSOR #DW-100 DUAL TECHNOLOGY WHITE ON WHITE WITH MANUAL ON/AUTO OFF AND 15 SECOND-30 MINUTE TIME DELAY. CONTRACTOR SHALL ADJUST OCCUPANCY SENSOR TO MAXIMUM SETTING.

POWER

	JUNCTION BOX MOUNTED ON UNIT, WALL OR CEILING.
	MOTOR - REFER TO HVAC AND PLUMBING EQUIPMENT SCHEDULES FOR HORSEPOWER, KW, ETC.
	DISCONNECT SWITCH/BUS PLUG
	COMBINATION MAGNETIC MOTOR STARTER/DISCONNECT SWITCH.
	EMERGENCY POWER OFF PUSHBUTTON. (EPO)
	CONDUIT ROUTED CONCEALED IN WALLS.
	CONDUIT ROUTED EXPOSED.
	CONDUIT ROUTED UNDERGROUND
	CONDUIT ROUTED IN FLOOR BELOW AGAINST EXISTING STRUCTURE.
	HOMERUN TO PANEL WITH PANEL AND CIRCUIT NUMBER DESIGNATIONS. SHORT HASH MARK INDICATES HOT WIRE, LONG HASH MARK INDICATES NEUTRAL WIRE, CURVED HASH MARK INDICATES GROUND WIRE.
	PARTIAL HOMERUN
	INDICATES SEPERATE CONDUIT WITH GROUND WIRE.
	LIGHTING & RECEPTACLE PANELBOARD. "H" DENOTES 3PH, 480/277V; "L" DENOTES 3PH, 120/208V
	DISTRIBUTION PANEL
	TRANSFORMER

SYMBOLS DESCRIPTION

TELEPHONE SYSTEM

	OVERHEAD PAGING SYSTEM SPEAKER
	OVERHEAD PAGING SYSTEM AMPLIFIER.

NURSE CALL SYSTEM

	NURSE CALL MASTER STATION
	NURSE CALL TERMINAL CABINET.
	NURSE CALL DUTY STATION. MOUNT 5'-0"A.F.F. U.N.O..
	NURSE EMERGENCY CALL STATION (CODE BLUE) WALL MOUNTED AT 5'-0" AFF U.N.O.
	NURSE CALL EMERGENCY TOILET STATION.
	NURSE CALL CORRIDOR DOME LIGHT
	NURSE CALL STATION, MOUNT 5'-0" A.F.F. U.N.O

FIRE ALARM

	FIRE ALARM SMOKE DETECTOR. CEILING MOUNTED.
	OVERHEAD PAGING SYSTEM SPEAKER
	SPRINKLER SYSTEM WATER FLOW SWITCH.
	SPRINKLER SYSTEM VALVE SUPERVISOR SWITCH.
	FIRE ALARM MANUAL PULL STATION. MOUNTED 48" AFF TO CENTRAL LINE OF STATION.
	FIRE ALARM OUTPUT CONTROL RELAY.
	FIRE ALARM CONTROL PANEL
	FIRE ALARM STROBE, WALL MOUNTED 80" AFF.
	FIRE ALARM REMOTE ANNUNCIATOR
	AUTOMATIC DAMPER.
	FIRE SMOKE DAMPER
	FIRE ALARM TELEPHONE JACK
	SECURITY TYPE PANIC BUTTON. MOUNT 54" A.F.F..
	OVERHEAD PAGING SYSTEM AMPLIFIER.

ABBREVI. DESCRIPTION

A	AMPS
ADA	AMERICANS WITH DISABILITIES ACT
ADO	AUTOMATIC DOOR OPENER
AFF	ABOVE FINISHED FLOOR
AF	AMPERE FRAME
AHU	AIR HANDLING UNIT
ARCH	ARCHITECT
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
BC	BARE COPPER
BRIP	BOILER PLANT INSTRUMENTATION PANEL
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TV
CKT	CIRCUIT
CLG	CEILING
DB	DIRECT BURIAL
DR	DUPLEX RECEPTACLE
E	EMERGENCY
EC	EMPTY CONDUIT
EDF	ELECTRIC DRINKING FOUNTAIN
EF	EXHAUST FAN
EG	EQUIPMENT GROUND
ELEV	ELEVATOR
ELEC	ELECTRICAL
EMT	ELECTRICAL METALLIC TUBING
EW	ELECTRICAL WATER COOLER
EWC	EMERGENCY
EX	EXISTING
EXP	EXPANSION JOINT
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FIXT	FIXTURE
FUT	FUTURE
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GTB	GROUND TERMINAL BOX
HOA	HAND OFF AUTOMATIC
HP	HORSEPOWER
HV	HIGH VOLTAGE
IG	ISOLATED GROUND
JB	JUNCTION BOX
KVA	KILOVOLT-AMPS
KW	KILOWATTS
KWH	KILOWATT-HOUR
LTG	LIGHTING
LTS	LIGHTS
LV	LOW VOLTAGE
M	METER
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MOP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUGS ONLY
MECH	MECHANICAL
MH	MAN HOLE
MTD	MOUNTED
MTD HGT	MOUNTING HEIGHT
MTG	MOUNTING
N	NEW
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANU. ASSOC.
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NF	NON-FUSED
NFSS	NON-FUSED SAFETY SWITCH
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
P	POLE
PB	PULL BOX
PH	PHASE
PLUMB	PLUMBING
PNL	PANEL
PWR	POWER
R	RELAY
RA	RETURN AIR
RE:	REFERENCE, REFER
SA	SUPPLY AIR
SD	SMOKE DETECTOR
SIG	SIGNAL
SF	SQUARE FEET
SPEC	SPECIFICATION, SPECIFIED
SS	SAFETY SWITCH
SPKLR	SPRINKLER
SPKR	SPEAKER
SR	SINGLE RECEPTACLE
TV	TELEVISION
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITER'S LABORATORIES, INC.
UNO	UNLESS NOTED OTHERWISE
V	VOLTAGE
VFD	VARIABLE FREQUENCY DRIVE
VP	VAPOR PROOF
WP	WEATHERPROOF
WT	WEATHER TIGHT
XFMR	TRANSFORMER

GENERAL NOTES

- G1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR THE EXACT LOCATION OF ALL CEILING MOUNTED DEVICES. DO NOT LOCATE CEILING MOUNTED ITEMS FROM THE ELECTRICAL DRAWINGS UNLESS ITEMS ARE NOT SHOWN ON THE REFLECTED CEILING PLANS; IN SUCH CASE, COORDINATE EXACT LOCATION OF ITEM WITH ARCHITECT.
- G2. REFER TO ARCHITECTURAL INTERIOR ELEVATION DRAWINGS FOR ADDITIONAL INFORMATION OF WALL MOUNTED DEVICES.
- G3. COORDINATE EXACT LOCATION OF ALL LIGHTING FIXTURES IN MECHANICAL AND ELECTRICAL ROOMS WITH EQUIPMENT, DUCTWORK AND PIPING.
- G4. ALL LAY-IN LIGHTING FIXTURES SHALL BE CONNECTED TO A BRANCH CIRCUIT JUNCTION BOX WITH A FLEXIBLE FIXTURE TAIL. A MAXIMUM OF FOUR FIXTURE TAILS SHALL BE CONNECTED TO A SINGLE JUNCTION BOX. FIXTURE TO FIXTURE WIRING OF LAY-IN LIGHTING FIXTURES IS NOT PERMITTED.
- G5. REFER TO MASTER SPECIFICATIONS FOR ALL NEW WORK IN THIS PROJECT.
- G6. THIS CONTRACTOR SHALL PROVIDE TYPED CIRCUIT DIRECTORY SHOWING TYPE OF LOAD AND ROOM NUMBER FOR EACH PANELBOARD USED ON THIS PROJECT.
- G7. EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT HOMERUN SHALL HAVE A SEPERATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.
- G8. MULTI-GANG BACKBOXES FOR DIFFERENT VOLTAGES AND TYPES OF EMERGENCY AND NORMAL BRANCH WIRING DEVICES SHALL HAVE DIVIDERS BETWEEN DEVICES.

DEMOLITION NOTES

- A. EXISTING EQUIPMENT, SUCH AS LIGHTING FIXTURES, WIRING DEVICES, CONDUITS, ETC., SHOWN ON PLANS TO BE REMOVED COMPLETELY. CUT/CAP CONDUITS AT THE AREA OF WORK PERIMETER AND REMOVE CONDUIT WITHIN THE WORK AREA. DISCONNECTING WIRING AT THE OVERCURRENT PROTECTIVE DEVICE AND REMOVE WIRING COMPLETELY FROM THE ABANDONED CONDUITS.
- B. MAINTAIN AND RESTORE, IF INTERRUPTED, ALL CONDUITS AND CONDUCTORS PASSING THROUGH RENOVATED AREAS AND SERVICING UNDISTURBED AREAS.

ELECTRICAL LOAD ANALYSIS  
NORMAL POWER

LOAD	KW	AMP
LIGHTING 4,500SFX3W/SF	13	16
SUB-TOTAL CONNECTED LOAD		13
RECEPTACLES 64@180VA=11520 FIRST 10KVA AT 100% REMAINDER AT 50%(1520VA)	10	12
	2	2
SUB-TOTAL CONNECTED LOAD		12
MECHANICAL AHU-11(1@7.5HP)	9	11
SUB-TOTAL CONNECTED LOAD		9
MISCELLANEOUS	15	18
SUB-TOTAL CONNECTED LOAD		15
25% LIGHTING	3	4
25% LARGEST MOTOR	3	4
SUB-TOTAL CONNECTED LOAD		6
TOTAL CONNECTED LOAD		55
EXISTING ELECTRICAL SERVICE AT 277/480V-3PH-4W		83

ELECTRICAL LOAD ANALYSIS  
EMERGENCY POWER

LOAD	KW	AMP
LIGHTING		
EGRESS	2	2
RECEPTACLES	6	7
TOTAL CONNECTED LOAD		8
EXISTING ELECTRICAL SERVICE AT 277/480V-3PH-4W		83

"ISSUED FOR BIDS"- FULLY SPRINKLERED

SCHEMATIC DESIGN SUBMISSION	08/02/10
DESIGN DEVELOPMENT SUBMISSION	09/03/10
CONSTRUCTION DOCUMENT SUBMISSION	11/22/10
ISSUE FOR BIDS	12/19/11
Revisions:	Date

CONSULTANTS:



12-19-11

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STRUCTURAL ENGINEERS	PINNACLE STRUCTURAL
FIRE PROTECTION ENGINEERS	PROTECTION DEVELOPMENT INC.
CIVIL ENGINEERS	BREWER AND ESCALANTE

Drawing Title
NOTES, LEGEND, ABBREVIATIONS AND LOAD ANALYSIS
NO SCALE

Approved Project Director

Project Title
BUILDING 11 ADDITION AND INTERIOR RENOVATIONS

Project Number
674A4-CSI-516
Building Number
11

Office of  
Construction  
and Facilities  
Management

Location  
WACO, TEXAS

Date
19 DEC 2011

Checked
FP

Drawn
JP

Drawing Number
11
ES000
Dwg. of

